

[illegible]

An optical waveguide ridge 14 has a top surface 14a stretching uniformly from a top surface of a semiconductor substrate 12, the top surface 14a being in contact with an exposed surface of the p-type electrode 22. The p-type electrode 22 is extended from the top surface 14a of the waveguide ridge 14 downward while in close contact with a dielectric film 16 furnished on the flat top surface 14a of the optical waveguide ridge 14. The p-type electrode 22 is extended over the dielectric film 16 on to the top surface 12a of the semiconductor substrate 12 where an end of the p-type electrode 22 is connected into a bonding pad 22a.